

EXHIBIT A

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA

NATERA, INC.,

Plaintiff,

v.

NEOGENOMICS LABORATORIES,
INC.,

Defendant.

Case No. 1:23-cv-629-CCE-JLW

EXHIBIT A to Request for Internation Judicial Assistance pursuant to the Hague Convention of 18 March 1970 on the Taking of Evidence Abroad in Civil or Commercial Matters

Topics for the Examination of Dr. Mariam Jamal-Hanjani:

1. A description of the role and involvement of Natera, Inc. (“Natera”) in the research relating to and the preparation of Dr. Jamal-Hanjani’s thesis, “The role of intratumour heterogeneity and chromosomal instability in cancer” submitted in August 2015, Ex. 1, (the “**Jamal-Hanjani Thesis**”).
2. The identities and roles of individuals at Natera that Dr. Jamal-Hanjani interacted with whilst working on the Jamal-Hanjani Thesis (collectively, the “**Natera Personnel**”).
3. A description of the role and involvement of Natera in the research relating to and the preparation of the TRAcking Cancer Evolution through therapy (Rx) (“**TRACERx study**”).
4. The identities and roles of individuals at Natera that Dr. Jamal-Hanjani interacted with whilst working on the TRACERx study.

5. Dr. Jamal-Hanjani's role in the conception of methods of selecting single nucleotide variants from tumour regions based on the results of whole exome sequencing as described in Sections 2.5.1 and 2.5.2 of the Jamal-Hanjani Thesis.
6. The nature and content of Dr. Jamal-Hanjani's communications with Natera, including with the named inventors of the U.S. Patent Nos. 11,319,596, Ex. 2, (the “‘596 patent”) and 11,530,454, Ex. 3, (the “‘454 patent”) namely Tudor Pompiliu Constantin, Huyesin Eser Kirkizlar, Styrmir Sigurjonsson, Bernhard Zimmermann, Joshu Babiarz, Lane A. Eubank, George Gemelos, Matthew Micah Hill, and Onur Sakarya (the “**Named Inventors**”), regarding methods of selecting single nucleotide variants from tumour regions described in Section 2.5 of the Jamal-Hanjani Thesis during the “collaboration with Natera” *See* Ex. 1, Jamal-Hanjani Thesis at pages 5, 66, 139, 155, 187.
7. Dr. Jamal-Hanjani's role in the conception of a method comprising detecting truncal (“clonal” or “ubiquitous”) mutations in cfDNA, wherein truncal mutations are defined as mutations that are present in every tumor region sampled from a patient, as described in Sections 3.1 and 3.8 of the Jamal-Hanjani Thesis.
8. Dr. Jamal-Hanjani's role in the conception of a method comprising detecting branch (“subclonal” or “heterogeneous”) mutations in cfDNA, wherein branch mutations are defined as mutations that are present in some regions of the tumor but not all, as described in Sections 3.1 and 3.8 of the Jamal-Hanjani Thesis.
9. Dr. Jamal-Hanjani's understanding of the extent to which the description of “clonal” mutations in Example 13 of the '454 Patent corresponds to the definition of truncal mutations (also referred to as “clonal” or “ubiquitous” mutations) described in Sections 3.1 and 3.8 of the Jamal-Hanjani Thesis.

10. Dr. Jamal-Hanjani's understanding of the extent to which the description of "subclonal" mutations in Example 13 of the '454 Patent corresponds to the definition of branch mutations (also referred to as "subclonal" or "heterogeneous" mutations) described in Sections 3.1 and 3.8 of the Jamal-Hanjani Thesis.
11. Dr. Jamal-Hanjani's understanding of the extent to which the description of "clonal" mutations in Example 13 of the '596 Patent corresponds to the definition of truncal mutations (also referred to as "clonal" or "ubiquitous" mutations) described in Sections 3.1 and 3.8 of the Jamal-Hanjani Thesis.
12. Dr. Jamal-Hanjani's understanding of the extent to which the description of "subclonal" mutations in Example 13 of the '596 Patent corresponds to the definition of branch mutations (also referred to as "subclonal" or "heterogeneous" mutations) described in Sections 3.1 and 3.8 of the Jamal-Hanjani Thesis.
13. Dr. Jamal-Hanjani's role in the conception of methods comprising detecting both truncal and branch single-nucleotide variants in cell-free DNA (cfDNA) as described in Section 2.12 of the Jamal-Hanjani Thesis.
14. Dr. Jamal-Hanjani's role in the conception of methods comprising identifying truncal and branch single-nucleotide variants in tumors of individual patients and then tracking the identified mutations in cfDNA as described in Section 2.12 of the Jamal-Hanjani Thesis.
15. The nature and content of Dr. Jamal-Hanjani's communications with Natera, including the Named Inventors, regarding methods comprising detecting both truncal and branch single-nucleotide variants in cell-free DNA (cfDNA) as described in Section 2.12 of the Jamal-Hanjani Thesis during the "collaboration with Natera." *See* Ex. 1, Jamal-Hanjani Thesis at pages 5, 66, 139, 155, 187.

16. Dr. Jamal-Hanjani's understanding at the time of writing her thesis as described in Section 5.1 of the Jamal-Hanjani Thesis, that it had not been determined whether both subclonal and clonal mutations could be successfully detected in cfDNA prior to the TRACERx study.
17. Dr. Jamal-Hanjani's understanding at the time of writing her thesis as described in the Abstract of the Jamal-Hanjani Thesis that the utility of tracking both subclonal and clonal mutations in cfDNA had not been determined prior to the TRACERx study.
18. Dr. Jamal-Hanjani's understanding at the time of writing her thesis as described in Sections 5.1 and 5.5 of the Jamal-Hanjani Thesis that it had not been determined how representative cfDNA is of the underlying genomic landscape of tumours, including subclonal and clonal mutations, prior to the TRACERx study.
19. Dr. Jamal-Hanjani's contribution to the conception of methods comprising determining clonal heterogeneity of a tumor sample based on multi-region sampling as described in Section 2.7 of the Jamal-Hanjani Thesis and/or the results of said methods for patients L012, L013, L015, and L017.
20. The nature and content of Dr. Jamal-Hanjani's communications with Natera, including the Named Inventors, regarding methods comprising determining clonal heterogeneity of a tumor sample based on multi-region sampling as described in Section 2.7 of the Jamal-Hanjani Thesis and/or the results of said methods for patients L012, L013, L015, and L017 during the "collaboration with Natera." *See* Ex. 1, Jamal-Hanjani Thesis at pages 5, 66, 139, 155, 187.

21. Dr. Jamal-Hanjani's contribution to the conception of methods of selecting single-nucleotide variants identified using whole-exome sequencing (WES) of patient tumor samples for profiling in cfDNA as described in Section 2.8.
22. The nature and content of Dr. Jamal-Hanjani's communications with Natera, including the Named Inventors, regarding methods of selecting single-nucleotide variants identified using whole-exome sequencing (WES) of patient tumor samples for profiling in cfDNA as described in Section 2.8 and/or the single-nucleotide variants selected using said methods during the "collaboration with Natera." *See* Ex. 1, Jamal-Hanjani Thesis at pages 5, 66, 139, 155, 187.
23. The extent to which FIG. 51B of the '454 Patent lists single nucleotide variants identified for profiling in cfDNA using the methods as described in Section 2.8 of the Jamal-Hanjani Thesis.
24. The extent to which FIG. 53A of the '454 Patent lists single nucleotide variants identified for profiling in cfDNA using the methods as described in Section 2.8 of the Jamal-Hanjani Thesis.
25. The extent to which FIG. 53B of the '454 Patent lists single nucleotide variants identified for profiling in cfDNA using the methods as described in Section 2.8 of the Jamal-Hanjani Thesis.
26. The extent to which FIG. 51B of the '596 Patent lists single nucleotide variants identified for profiling in cfDNA using the methods as described in Section 2.8 of the Jamal-Hanjani Thesis.

27. The extent to which FIG. 53A of the '596 Patent lists single nucleotide variants identified for profiling in cfDNA using the methods as described in Section 2.8 of the Jamal-Hanjani Thesis.
28. The extent to which FIG. 53B of the '596 Patent lists single nucleotide variants identified for profiling in cfDNA using the methods as described in Section 2.8 of the Jamal-Hanjani Thesis.
29. The extent to which FIG. 53B of the '596 Patent lists single nucleotide variants identified for profiling in cfDNA using the methods as described in Section 2.8 of the Jamal-Hanjani Thesis.
30. The extent to which claim 4 of the '596 patent recites mutations identified for profiling in cfDNA using the methods as described in Section 2.8 of the Jamal-Hanjani Thesis.
31. The extent to which claim 7 of the '596 patent recites mutations identified for profiling in cfDNA using the methods as described in Section 2.8 of the Jamal-Hanjani Thesis.
32. Dr. Jamal-Hanjani's contribution to the conception of methods comprising detecting both ubiquitous truncal and heterogeneous branch single-nucleotide variants in cfDNA using a multiplex PCR and sequencing approach as described in Section 5.4 of the Jamal-Hanjani thesis.
33. The nature and content of Dr. Jamal-Hanjani's communications with Natera, including the Named Inventors, regarding methods comprising detecting both ubiquitous truncal and heterogeneous branch single-nucleotide variants in cfDNA using a multiplex PCR and sequencing approach as described in Section 5.4 of the Jamal-Hanjani thesis during the "collaboration with Natera." *See* Ex. 1, Jamal-Hanjani Thesis at pages 5, 66, 139, 155, 187.

34. Dr. Jamal-Hanjani's contribution to the design of the experiments related to the detection of single-nucleotide variants in cfDNA described in Section 5.4 of the Jamal-Hanjani thesis.
35. The nature and content of Dr. Jamal-Hanjani's communications with Natera, including the Named Inventors, regarding the design of the experiments related to the detection of single-nucleotide variants in cfDNA described in Section 5.4 of the Jamal-Hanjani thesis during the "collaboration with Natera." *See Ex. 1, Jamal-Hanjani Thesis at pages 5, 66, 139, 155, 187.*
36. Dr. Jamal-Hanjani's understanding of the extent to which Example 13 of the '454 patent is the same or similar to the experiments described in Section 5.4 of the Jamal-Hanjani thesis.
37. Dr. Jamal-Hanjani's understanding of the extent to which Example 13 of the '596 patent is the same or similar to the experiments described in Section 5.4 of the Jamal-Hanjani thesis.
38. Dr. Jamal-Hanjani's understanding of the extent to which Figure 51A of the '596 Patent reflects the same or similar data shown in Table 22 of the Jamal-Hanjani Thesis.
39. Dr. Jamal-Hanjani's understanding of the extent to which Figure 51A of the '454 Patent reflects the same or similar data shown in Table 22 of the Jamal-Hanjani Thesis.
40. The nature and content of Dr. Jamal-Hanjani's communications with Natera, including the Named Inventors, regarding the data shown in Table 22 of the Jamal-Hanjani Thesis during the "collaboration with Natera." *See Ex. 1, Jamal-Hanjani Thesis at pages 5, 66, 139, 155, 187.*

41. Dr. Jamal-Hanjani's understanding of the extent to which the patients and corresponding single-nucleotide variants shown in Figure 51B of the '596 Patent correspond to the single-nucleotide variants identified in Table 4 of the Jamal-Hanjani Thesis.
42. Dr. Jamal-Hanjani's understanding of the extent to which the patients and corresponding single-nucleotide variants shown in Figure 51B of the '454 Patent correspond to the single-nucleotide variants identified in Table 4 of the Jamal-Hanjani Thesis.
43. Dr. Jamal-Hanjani's understanding of the extent to which the protocol for identifying both clonal and subclonal mutations and detecting said mutations in cfDNA illustrated in FIG. 52 of the '596 Patent and described in column 168, lines 46–54 of the '596 patent corresponds to the protocol described in Section 2.12.1 of the Jamal-Hanjani Thesis.
44. Dr. Jamal-Hanjani's understanding of the extent to which the protocol for identifying both clonal and subclonal mutations and detecting said mutations in cfDNA illustrated in FIG. 52 of the '454 Patent and described in column 168, lines 20–28 of the '454 patent corresponds to the protocol described in Section 2.12.1 of the Jamal-Hanjani Thesis.
45. Dr. Jamal-Hanjani's understanding of the extent to which Figure 54B of the '596 Patent reflects the same or similar data shown in Figure 49 of the Jamal-Hanjani Thesis.
46. Dr. Jamal-Hanjani's understanding of the extent to which Figure 54B of the '454 Patent reflects the same or similar data shown in Figure 49 of the Jamal-Hanjani Thesis.
47. The nature and content of Dr. Jamal-Hanjani's communications with Natera, including the Named Inventors, regarding the data shown in Figure 49 of the Jamal-Hanjani Thesis during the "collaboration with Natera." *See* Ex. 1, Jamal-Hanjani Thesis at pages 5, 66, 139, 155, 187.

48. Dr. Jamal-Hanjani's understanding of the extent to which Figure 53A of the '596 Patent reflects the same or similar data shown in Table 23 of the Jamal-Hanjani Thesis.
49. Dr. Jamal-Hanjani's understanding of the extent to which Figure 53A of the '454 Patent reflects the same or similar data shown in Table 23 of the Jamal-Hanjani Thesis.
50. Dr. Jamal-Hanjani's understanding of the extent to which Figure 53B of the '596 Patent reflects the same or similar data shown in Table 23 of the Jamal-Hanjani Thesis.
51. Dr. Jamal-Hanjani's understanding of the extent to which Figure 53B of the '454 Patent reflects the same or similar data shown in Table 23 of the Jamal-Hanjani Thesis.
52. The nature and content of Dr. Jamal-Hanjani's communications with Natera, including the Named Inventors, regarding the data shown in Table 23 of the Jamal-Hanjani Thesis during the "collaboration with Natera." *See* Ex. 1, Jamal-Hanjani Thesis at pages 5, 66, 139, 155, 187.
53. Dr. Jamal-Hanjani's understanding of the content of with the Named Inventors of the '596 patent and '454 patent regarding the data shown in Table 23 of the Jamal-Hanjani Thesis.
54. Dr. Jamal-Hanjani's understanding of the extent to which claims 1-9 of the '596 patent reflect the same or similar methods to those described in Section 2.12 of the Jamal-Hanjani Thesis.
55. Dr. Jamal-Hanjani's understanding of the extent to which claims 1-9 of the '596 patent reflect the same or similar methods to those described in Section 2.12.4 of the Jamal-Hanjani thesis.

56. Dr. Jamal-Hanjani's understanding of the extent to which claims 1-9 of the '596 patent reflect the same or similar methods to those described in Section 5.4 of the Jamal-Hanjani thesis.

57. Dr. Jamal-Hanjani's understanding of the extent to which claims 4 and 7 of the '596 patent reflect methods comprising detecting the same single-nucleotide variants identified in Table 23 of the Jamal-Hanjani Thesis.

58. Dr. Jamal-Hanjani's contribution to the conception of the same or similar methods described by claims 1-9 of the '596 patent.

59. The nature and content of Dr. Jamal-Hanjani's communication to Natera, including the Named Inventors, of the same or similar methods described by claims 1-9 of the '596 patent.

60. Dr. Jamal-Hanjani's understanding of the extent to which the CYFIP1, FAT1, MLLT4, RASA1, HERC4, JAK2, MSH2, MTOR, PLCG2, GABRG1, and TRIM67 mutations of claim 4 of the '596 patent are the same as the mutations identified in Table 23 of the Jamal-Hanjani thesis."

61. Dr. Jamal-Hanjani's understanding of the extent to which CIC, KDM6A, NF1, and TRIM67 mutations of claim 7 of the '596 patent are the same as the mutations identified in Table 23 of the Jamal-Hanjani thesis."

62. Dr. Jamal-Hanjani's contribution to the conception of the methods comprising detecting both ubiquitous and heterogeneous somatic mutations in cfDNA described in M. Jamal-Hanjani et al., Detection of Ubiquitous and Heterogeneous Mutations in Cell-Free DNA from Patients with Early-Stage Non-Small-Cell Lung Cancer, 27 ANNALS OF ONCOLOGY 862-867 (Jan. 28, 2016), Ex. 4, (hereinafter, "Jamal-Hanjani 2016").

63. The nature and content of Dr. Jamal-Hanjani's communication to Natera, including the Named Inventors, regarding the methods comprising detecting both ubiquitous and heterogeneous somatic mutations in cfDNA described in Jamal-Hanjani 2016.
64. The nature and content of Dr. Jamal-Hanjani's communication to Tudor Pompiliu Constantin, Huyesin Eser Kirkizlar, Styrmir Sigurjonsson, and Bernhard Zimmermann of the methods comprising detecting both ubiquitous and heterogeneous somatic mutations in cfDNA described in Jamal-Hanjani 2016.
65. Dr. Jamal-Hanjani's understanding of the extent to which Figure 53A of the '596 Patent reflects the same or similar data shown in Table 1 of Jamal-Hanjani 2016.
66. Dr. Jamal-Hanjani's understanding of the extent to which Figure 53A of the '454 Patent reflects the same or similar data shown in Table 1 of Jamal-Hanjani 2016.
67. Dr. Jamal-Hanjani's understanding of the extent to which Figure 53B of the '596 Patent reflects the same or similar data shown in Table 1 of Jamal-Hanjani 2016.
68. Dr. Jamal-Hanjani's understanding of the extent to which Figure 53B of the '454 Patent reflects the same or similar data shown in Table 1 of Jamal-Hanjani 2016.
69. Dr. Jamal-Hanjani's understanding of the extent to which Example 13 of the '454 patent is the same or similar to the experiments described in Jamal-Hanjani 2016.
70. Dr. Jamal-Hanjani's understanding of the extent to which Example 13 of the '596 patent is the same or similar to the experiments described in Jamal-Hanjani 2016.
71. Dr. Jamal-Hanjani's contribution to the conception of methods comprising detecting the single-nucleotide variants identified in claims 4 and 7 of the '596 patent in cfDNA.

72. The nature and content of Dr. Jamal-Hanjani's communication to Natera, including the Named Inventors, of methods comprising detecting the single-nucleotide variants identified in claims 4 and 7 of the '596 patent in cfDNA.

73. Dr. Jamal-Hanjani's understanding of the extent to which claims 3-5, 7, 17-19, and 21 of the '454 patent reflect the same or similar methods to those described in Section 2.12 of the Jamal-Hanjani Thesis.

74. Dr. Jamal-Hanjani's understanding of the extent to which claims 3-5, 7, 17-19, and 21 of the '454 patent reflect the same or similar methods to those described in Section 2.12.4 of the Jamal-Hanjani thesis.

75. Dr. Jamal-Hanjani's understanding of the extent to which claims 3-5, 7, 17-19, and 21 of the '454 patent reflect the same or similar methods to those described in Section 5.4 of the Jamal-Hanjani thesis.

76. Dr. Jamal-Hanjani's contribution to the conception of the same or similar methods described by claims 3-5, 7, 17-19, and 21 of the '454 patent.

77. The nature and content of Dr. Jamal-Hanjani's communication to Natera, including the Named Inventors, of the same or similar methods described by claims 3-5, 7, 17-19, and 21 of the '454 patent.

78. Any additional questions that arise from the documents produced in response to NeoGenomics' Letter of Request.